**Amendments in the claims**

1. (previously presented) A light source comprising:

a) a passively Q-switched laser for generating a pulsed primary beam at a primary wavelength, wherein the passively Q-switched laser comprises an optical cavity containing a gain medium pumped by a pump source, and wherein said passively Q-switched laser generates said pulsed primary beam with a duty cycle ranging from .01% to 1% and a pulse repetition rate of at least 100 kHz;

b) a fiber amplifier coupled to an output of said passively Q-switched laser for receiving said pulsed primary beam and amplifying said pulsed primary beam to produce a pulsed intermediate beam of intermediate pulses at said primary wavelength; and

c) a nonlinear element for frequency converting said pulsed intermediate beam in a single pass by second harmonic generation to produce a pulsed output beam at an output wavelength.

2. (original) The light source of claim 1, wherein said primary wavelength ranges from 860 nm to 1100 nm.

3. (original) The light source of claim 1, wherein said output wavelength ranges from 430 nm to 550 nm.

4. (original) The light source of claim 1, wherein said fiber amplifier is a cladding-pumped amplifier.

5. (original) The light source of claim 4, wherein said cladding-pumped amplifier has a predetermined core section and a predetermined cladding section.

6. (original) The light source of claim 4, wherein said cladding-pumped amplifier has a length of less than 2 m.

7. (original) The light source of claim 1, wherein said passively Q-switched laser comprises a saturable absorber Q-switch.

8-10. (canceled)

11. (original) The light source of claim 1, wherein said nonlinear element comprises at least one nonlinear optical crystal.

12. (original) The light source of claim 11, wherein said at least one nonlinear optical crystal comprises a borate.

13. (original) The light source of claim 12, wherein said borate is selected from the group consisting of LBO and BBO.

14. (previously presented) The light source of claim 1, wherein said pulsed intermediate beam results in a frequency conversion efficiency of at least 10%.

15. (previously presented) The light source of claim 14, wherein said frequency conversion efficiency is at least 50%.

16. (currently amended) A display system having a light source comprising:

a) a passively Q-switched laser for generating a pulsed primary beam at a primary ~~wavelength ,wherein~~ wavelength, wherein the passively Q-switched laser comprises an optical cavity containing a gain medium pumped by a pump source, and wherein said passively Q-switched laser generates said pulsed primary beam with a duty cycle ranging from .01% to 1% and a pulse repetition rate of at least 100 kHz;

b) a fiber amplifier coupled to an output of said passively Q-switched laser for receiving said pulsed primary beam and amplifying said pulsed primary beam to produce a pulsed intermediate beam of intermediate pulses at said primary wavelength; and

c) a nonlinear element for frequency converting said pulsed intermediate beam in a single pass by second harmonic generation to produce a pulsed output beam at an output wavelength.

17. (original) The display system of claim 16, further comprising:

a) a plurality of display pixels being refreshed at a refresh rate;

b) a synchronizing mechanism for synchronizing output pulses of said pulsed output beam with said refresh rate.

18. (original) The display system of claim 17, wherein said synchronizing mechanism synchronizes said pulses at an integer multiple of said refresh rate.

19. (original) The display system of claim 16, wherein said primary wavelength ranges from 860 nm to 1100 nm.

20. (original) The display system of claim 16, wherein said output wavelength ranges from 430 nm to 550 nm.

21. (original) The display system of claim 16, wherein said fiber amplifier is a cladding-pumped amplifier.

22. (original) The display system of claim 21, wherein said cladding-pumped amplifier has a predetermined core section and a predetermined cladding section.

23. (original) The display system of claim 21, wherein said cladding-pumped amplifier has a length of less than 2 m.

24. (original) The display system of claim 16, wherein said passively Q-switched laser comprises a saturable absorber Q-switch.

25-27. (cancelled)

28. (original) The display system of claim 16, wherein said nonlinear element comprises at least one nonlinear optical crystal.

29. (original) The display system of claim 28, wherein said at least one nonlinear optical crystal comprises a borate.

30. (original) The display system of claim 29, wherein said borate is selected from the group consisting of LBO and BBO.

31. (previously presented) The display system of claim 16, wherein said pulsed intermediate beam results in a frequency conversion efficiency of at least 10%.

32. (previously presented) The display system of claim 31, wherein said frequency conversion efficiency is at least 50%.

**DETAILED ACTION / Paragraph 1; Claim rejections under 103(a)**

Claims 1-7, 9, 11-24, 26, and 28-32 stand rejected under 35 USC 103(a) over Galvanauskas et al. (US 6,208,458), hereinafter '458, in view of Hart et al. (US 4,539,685), hereinafter '685.

With respect to independent claims 1 and 16, Examiner holds that '458 discloses the claimed "duty cycle ranging from 0.01% to 1%", and draws attention to line 31 of column 11 of '458. Although "1%" does appear on the indicated line of '458, it is referring to triggering diode electronics 700 by a small fraction (i.e., the quoted 1%) of the output power of source 715 (col. 11 lines 28-32). Thus this section of '458 does not relate to duty cycle. In fact, the '458 reference has no explicit teaching related to duty cycle at all. Furthermore, '458 provides two numerical examples from which duty cycles can be calculated. In the first such example (col 12, lines 51-52), pulse lengths of 350 ps to 1 ns are provided at 10 Hz. In the second such example (col 14, lines 41-42), pulse lengths of 1 ns are provided at 1-10 kHz. For both of these examples, the duty cycles are 0.001% or less, which is outside the claimed range by at least an order of magnitude.

The '685 reference discloses a passively Q switched laser having a variable repetition rate which can be 100 kHz or higher. The '685 reference gives a numerical example where the repetition rate is 100 kHz and the pulse width is 180 ns, which implies a duty cycle of 1.8%. Thus the duty cycle in the '685 reference example having a repetition rate of 100 kHz is outside the claimed range by nearly a factor of two. In contrast, '685

provides a second example where the repetition rate is 4 kHz and the pulse duration is 90 ns, giving a duty cycle of 0.036%.

Thus the '685 reference teaches away from a combination having repetition rate > 100 kHz and duty cycle between 0.01% and 1% as claimed. More specifically, the combined teachings of references '458 and '685 provide examples where **either** the pulse repetition rate is greater than 100 kHz **or** the duty cycle is between 0.01% and 1%, but no examples where both conditions are met simultaneously.

Thus Applicants respectfully traverse this rejection of claims 1 and 16, and request reconsideration in view of the preceding arguments.

Claims 9 and 26 are cancelled.

Claims 2-7 and 11-15 depend from claim 1, and claims 17-24 and claims 28-32 depend from claim 16, so the above argumentation in connection with claims 1 and 16 is responsive to this rejection of claims 2-7, 11-15, 17-24 and 28-32.